

Work Order ID 69778

Thursday, May 19, 2011 8:55:38 AM

Page 1

Item ID: D4355-1

Accept

Revision ID:

Item Name: Bearpaw

Start Date: 5/19/2011 Start Qty: 20.00

Required Date: 5/24/2011 Req'd Qty: 20.00

Reference:

Approvals:

Process Plan:

Date: 11-05-19

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4355	B

120	FLOW WATER JET	0.00
Waterjet	Memo	0.00
FLOW CNC Waterjet	Cut Blank as per D4355-1 File	

B11-5-20

B11-7-11

(20)

130	HAAS CNC VERTICAL MACHINING #1	0.00
HAAS 1	Memo	0.00

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining
2-Machine as per Folio FB049 and Dwg
FOLIO REV: AA
DWG REV: B

3-Deburr

BA 11/07/07

20 3

Pto 7

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: 243557 PAR #: _____ Fault Category: Machining NCR: Yes No DQA: 18 Date: 11/07/15
 Resolution: Scrap + Fix Program Disposition: Scrap QA: N/C Closed: 18 Date: 11-07-15

NCR: <u>6277g</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/07/06	130	1 blank scrap → profile on the blank is from revision A so the rads don't match the drawing. B.C: Programing error	<u>11/07/14</u> <u>OS/042</u>	→ Scrap and destroy → replace with B <u>118257</u> → Program has been updated for previous operation (120)	B.A 11/07/06	<u>11/07/14</u>	<u>11/07/14</u>	<u>5</u> <u>11/07/14</u>
11/07/07	130	1 part scrap → the bottom rib is profiled on one side like rev A and other side is OK. Program was not fully updated. B.C: Programing error	<u>11/07/14</u> <u>OS/042</u>	→ Scrap and destroy → replace with B <u>118257</u> → Program has been updated	B.A 11/07/07	<u>11/07/14</u>	<u>11/07/14</u>	
11/07/11	130	1 part scrap → .250 rads on ribs ends have been machined square due to a faulty tool path. B.C: Programing error	<u>11/07/14</u> <u>OS/042</u>	→ Scrap and destroy → replace with B <u>118257</u> → Program has been updated	B.A 11/07/11	<u>11/07/14</u>	<u>11/07/14</u>	

NOTE: Date & initial all entries

Work Order ID 69778

Thursday, May 19, 2011 8:55:38 AM



Page 2

Item ID: D4355-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearpaw

Start Date: 5/19/2011 Start Qty: 20.00



Cust Item ID:

Required Date: 5/24/2011 Req'd Qty: 20.00



Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

M.A 11/07/08

20

φ

Memo

0.00

150



QC

Quality Control

QC8- Inspect parts - second check

0.00

am 11/07/14

20

φ

Memo

0.00

151



Packaging

Packaging

Identify as per dwg & Stock Location: _____

0.00

Memo

PDP69781

0.00

P 11/7/14 (20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 69778

Thursday, May 19, 2011 8:55:38 AM

Page 3

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Accept

Revision ID:

Item Name: Bearpaw

Start Date: 5/19/2011 Start Qty: 20.00

Required Date: 5/24/2011 Req'd Qty: 20.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

u/h/14

MF
11-07-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, May 19, 2011 8:55:44 AM

Page 1

Work Order ID: 69778

Parent Item: D4355-1

Parent Item Name: Bearpaw




Start Date: 5/19/2011

Required Date: 5/24/2011

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A NEW ISSUE 11-04-11 JLMN VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10 		Purchased	No			120	sf	318.6000	5.3	111.5789			
UHMW 1" Black													

Location	Loc Qty	Loc Code
MAT018	318.6	
116554	2	
117321	76.6	
117738	240	

✓ 118184
118257

~~111-5-20~~
111-7-11

~~117138~~
111.5789
118257

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 69778
Description: BEAR PAW	Part Number: D4355-1
Inspection Dwg: D4355 Rev: B	Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.58	+/- .030	5.586	✓		Vern	GA-01
10.00	+/- .030	9.000	✓		Vern	CNC-02
8.63	+/- .030	8.625	✓		"	"
0.38	+/- .030	0.380	✓		Vern	GA-01
7.50	+/- .030	7.501	✓		Vern	CNC-02
8.56	+/- .030	8.565	✓		"	"
22.38	+/- .030	22.375	✓		Tape	GA-12
2.75	+/- .030	2.749	✓		Vern	GA-01
3.25	+/- .030	3.252	✓		"	"
0.95	+/- .030	0.966	✓		"	"
0.63	+/- .030	0.640	✓		"	"
0.38	+/- .030	0.395	✓		"	"
1.31	+/- .030	1.306	✓		"	"
R0.25	+/- .030	R0.250	✓		R-6	ref.
21.38	+/- .030	21.375	✓		Tape	GA-12
0.30x45°	+/- .030	0.320x45°	✓		Vern	GA-01
0.75	+/- .030	0.756	✓		"	"
1.38	+/- .030	1.384	✓		"	"
R1.00	+/- .030	R1.000	✓		R-6	ref.
24.00	+/- .030	24.00	✓		Tape	GA-12
4.250	+/- .010	4.253	✓		Vern	GA-01
9.88	+/- .030	9.884	✓		Vern	CNC-02
1.22	+/- .030	1.212	✓		Vern	GA-01

Measured by: A.A	Audited by: <i>aml</i>	Preliminary Approval:
Date: 11/07/14	Date: 11/07/14	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

DART AEROSPACE LTD		Work Order: 69778
Description: BEARPAW		Part Number: D4355-1
Inspection Dwg: 4355	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
6.625	+/- .010	6.630	✓		Vern	CNC-02
4.000	+/- .010	4.005	✓		Vern	GA-01
2.313	+/- .010	2.320	✓		"	"
9.125	+/- .010	9.134	✓		H-6	31006
2.312	+/- .010	2.316	✓		Vern	GA-01
27.00	+/- .030	27.020	✓		Tape	GA-12
0.25	+/- .030	0.262	✓		Vern	GA-01
0.07x45°	+/- .030	0.072x45°	✓		"	"
5.50	+/- .030	5.506	✓		"	"
φ0.261	+0.006 / -0.001	φ0.261	✓		"	"
φ0.650	+/- .010	φ0.653	✓		"	"
0.50	+/- .030	0.507	✓		D-6	GA-08
0.060x45°	+/- .030	0.065x45°	✓		Vern	GA-01

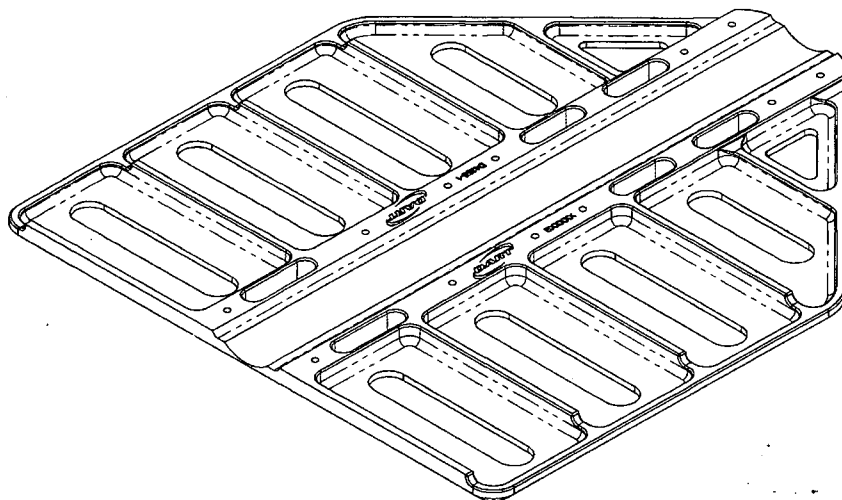
Measured by: B.A	Audited by: <i>cmf</i>	Preliminary Approval:
Date: 11/07/08	Date: 11/07/14	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

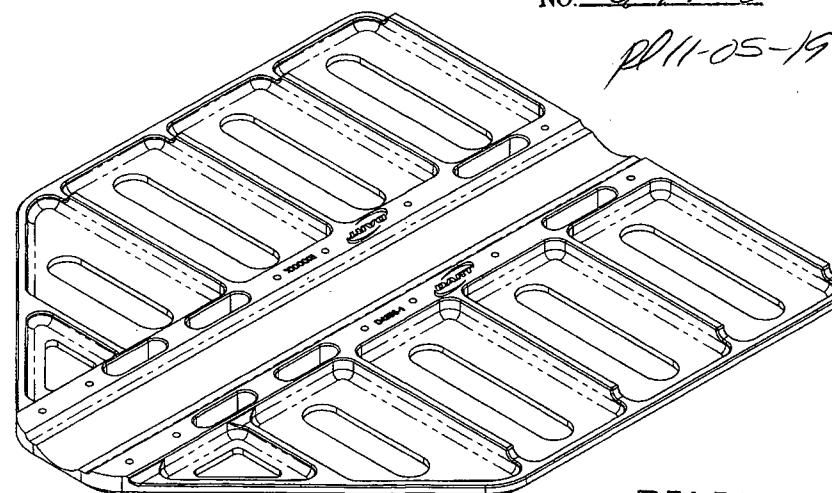
10.04.15

SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 49778

2011-05-19



D4355-1 206L/407 BEARPAW



RELEASED
 2011-05-19
MPD

NOTES:

- 1) MATERIAL: UHMW BLACK SPEC CONTROL DRAWING D2689, 1.000 THICK.
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: ENGRAVE WITH DART P/N "D4355-1" AND B/N "BXXXXX"
 0.010 - 0.012 DP AS SHOWN
- 7) WEIGHT: 6.88 lbs
- 8) ENGRAVE "DART" LOGO AS SHOWN 0.003 - 0.005 DP.

B	SHT 1 WEIGHT CORRECTED WAS 8.41 lbs. SHT 2 RIB DIMS UPDATED. ZN B4 RAD WAS 2.00. SHT 3, SECT. B-B RIB HEIGHT INCREASED. ALL SHTS DART LOGO UPDATED.		AJS	11.04.26
A	NEW ISSUE		AJS	11.03.21
REV.	DESCRIPTION		BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	AJS			
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B	
MFG. APPR.	<i>[Signature]</i>	D4355	SHEET 1 OF 3	
APPROVED	<i>[Signature]</i>	TITLE	SCALE	
DE APPR.	<i>[Signature]</i>	206L/407 BEARPAW	NTS	
DATE	11.04.26	COPYRIGHT © 2011 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>		

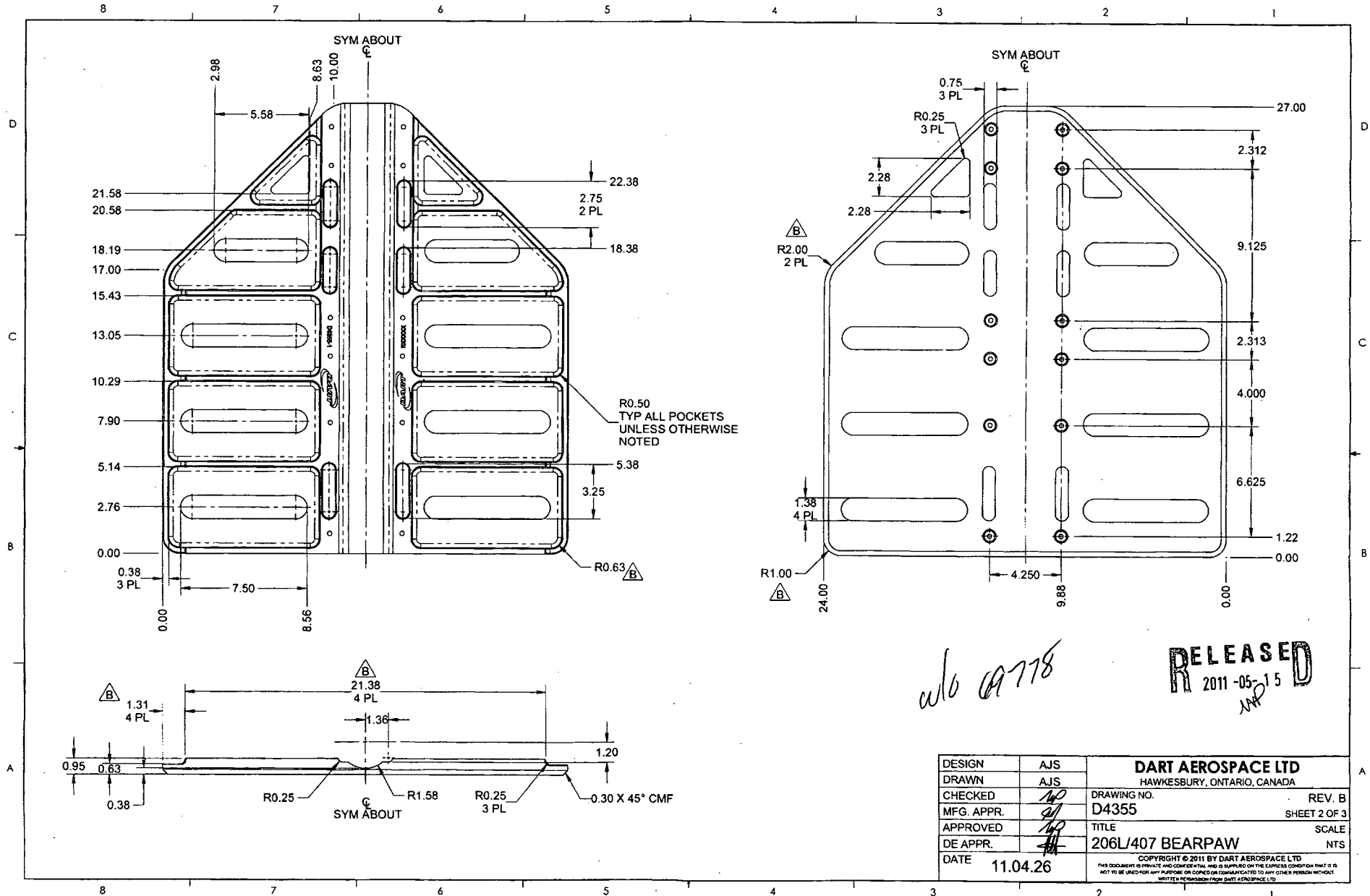
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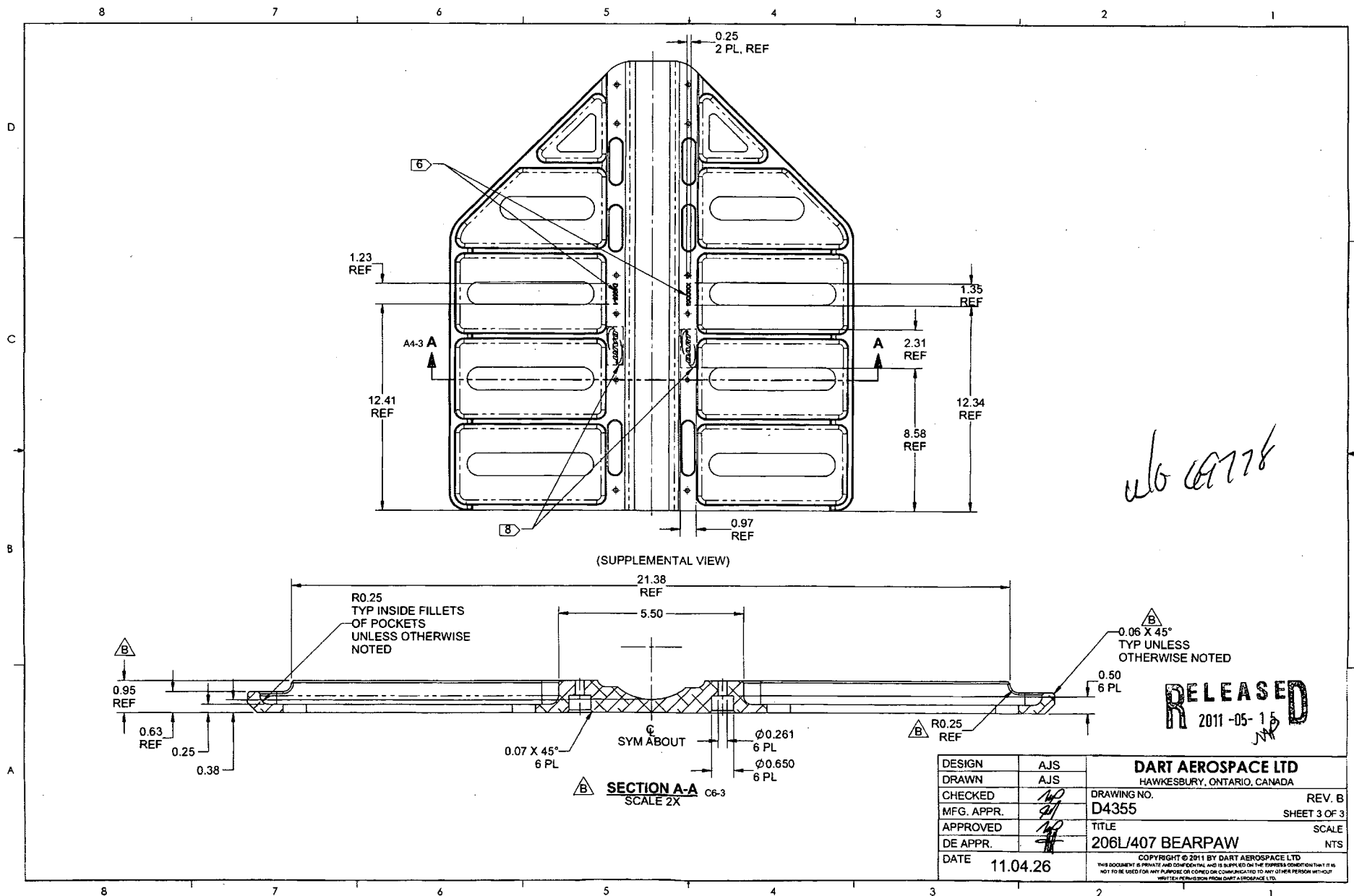
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